

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of July 9, 2009. Claims 2-4, 7-24, 28-31 and 33-34 remain in this application. Claims 1, 5, 6, 25-2, 32, and 35-36 have been canceled.

Reconsideration of the Application is requested.

The Office Action

Claims 2-4, 7-24 and 32-36 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory "process" under 35 U.S.C. §101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing.

The Examiner stated the recitation in claims 4, 15 and 20 indicate that the methods merely show the intended field of use. It does not provide meaningful limits on the claim's scope.

Independent method claims 4, 15 and 20 were amended to recite a method that is tied to a particular apparatus, that being an image processing unit halftone generator. The halftone generator is a very specific and particular apparatus which generates halftone screens used for printing halftoned images. It is not merely a field of use limitation. As stated in the Interim Examination Instructions for Evaluating Subject Matter Eligibility under 35 U.S.C. §101, "a field-of-use limitation merely indicates that the method is for use in a particular environment, such as 'for use with a machine' or 'for transforming an article', which would not require that the machine implement the method or that the steps of the method cause the article to transform." As is claimed in these claims, the method is performed by the halftone generator. For this reason, method claims 4, 15 and 20 are directed to statutory subject matter.

The Examiner also rejected claims 4, 15 and 20 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter, stating that these claimed methods do not transform any underlying subject matter to a different state or thing. Applicant respectfully disagrees.

As stated in the Interim Examination Instructions for Evaluating Subject Matter Eligibility under 35 U.S.C. §101, it has been found that transforming electronic data satisfies the transformation requirement when the nature of the data has been changed such that it has a different function or is suitable for a different use. Claims 4, 15 and 20 claim a method of transforming input image data representing physical image pixels, into halftone image data for rendering a halftoned image. Without this transformation, the image input data cannot form a halftoned image, since the halftone data has not been generated. For example, claim 4 claims generating a stochastic screen pixel turn-on sequence of turn-on values and partitioning these values, re-ordering them and then generating a stochastic halftone screen from the re-ordered values. Claims 15 and 20 claim a method of transforming input image data into a plurality of partitions each corresponding to a different pass of multi-pass printing and restricting pixels to particular partitions so that pixels in the image highlights turned on for printing are restricted to one of the partitions and pixels in the image shadows not turned on for printing are restricted to another one of the partitions. The input image data in these claims cannot be used to render a halftoned image unless it is transformed into data suitable for a different use, that of rendering a halftoned image, as claimed. For this reason, claims 4, 15 and 20 meet the transformation test and are directed to statutory subject matter.

Claim 28 is rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites only a single means for performing the desired function, and is therefore subject to rejection under 35 U.S.C. §112 as having undue breadth. See MPEP §2164.08(a); in re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983). Claim 28 covers every conceivable way of performing the desired function, and not merely the ways disclosed by Applicant. Therefore, claim 28 is not enabled by Applicant's specification.

Claim 28 was amended to recite means for partitioning and means for restricting as disclosed in paragraphs [061] - [065] and elsewhere the Specification rendering this rejection moot.

The Examiner stated claims 32-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Independent claim 4 was amended to include the limitation of claim 32 previously depending therefrom and is now patentable. Claim 32 was canceled. Independent claim 15 was amended to include the limitation of claim 35 previously depending therefrom and is now patentable. Claim 35 was canceled. Independent claim 20 was amended to include the limitation of claim 36 previously depending therefrom and is now patentable. Claim 36 was canceled.

The Examiner rejected claim 28 under 35 U.S.C. §102(e) as being anticipated by Gotoh. The Examiner stated Gotoh discloses a system (figure 16 and para. 49 of Gotoh) comprising means for restricting a substantial majority of the pixels turned on to render a tone to the minimum number of passes required to produce the tone (para. 71, lines 5-9 of Gotoh). In the example given, half of the turned-on pixels are printed in two passes (para. 71, lines 5-9 of Gotoh). Thus, only one-quarter of the turned-on pixels are printed in a single pass. Therefore, three-quarters of the turned-on pixels are restricted from being printed. Applicant respectfully disagrees. This claimed requirement depends on both the tonal value being produced and the number of passes the multi-pass printer makes, since different pixels are rendered in each pass. As described in the example provided in paragraphs [047] - [048] of specification, a halftone generator used for halftoning an image for a 4-pass printer restricts the lowest pixel turn-on values to a single partition used for one of the four passes, thereby restricting at least one of a) pixels in the image highlights turned on for printing to one of the partitions and b) pixels in the image shadows not turned on for printing to another one of the partitions. Gotoh does not teach or suggest this. For this reason, claim 28 is patentable over Gotoh.

CONCLUSION

For the reasons detailed above, it is submitted all remaining claims (Claims Claims 2-4, 7-24, 28-31 and 33-34) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

☒ Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	27	- 31 =	0
INDEPENDENT CLAIMS	4	- 4 =	0

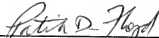
☒ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒ The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Patrick D. Floyd, at Telephone Number (216) 363-9000.

Respectfully submitted,

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